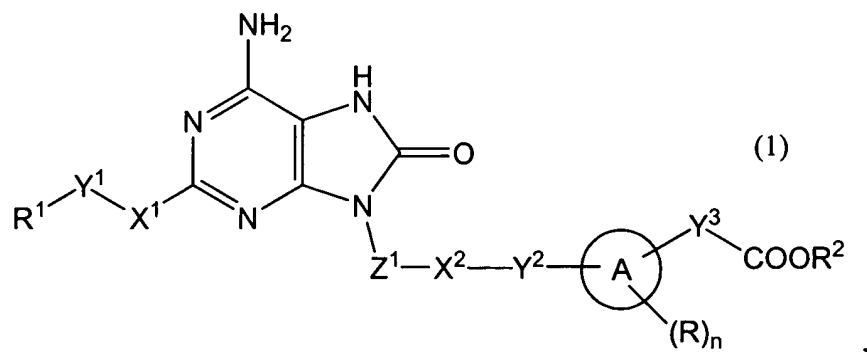


AMENDMENTS TO THE CLAIMS

1. (Original) An 8-oxoadenine compound shown by the formula (1):



wherein ring A represents a 6-10 membered aromatic carbocyclic ring or a 5-10 membered heteroaromatic ring;

R represents a halogen atom, an alkyl group, a hydroxyalkyl group, a haloalkyl group, an alkoxy group, a hydroxyalkoxy group, a haloalkoxy group, amino group, an alkylamino group, a dialkylamino group, or a cyclic amino group;

n represents an integer of 0-2, and when n is 2, the Rs may be the same or different;

Z¹ represents a substituted or unsubstituted alkylene group or a substituted or unsubstituted cycloalkylene group;

X² represents oxygen atom, sulfur atom, SO₂, NR⁵, CO, CONR⁵, NR⁵CO, SO₂NR⁵, NR⁵SO₂, NR⁵CONR⁶ or NR⁵CSNR⁶ (in which R⁵ and R⁶ are each independently hydrogen atom, a substituted or unsubstituted alkyl group, and a substituted or unsubstituted cycloalkyl group);

Y¹, Y² and Y³ represent each independently a single bond or an alkylene group;

X¹ represents oxygen atom, sulfur atom, SO₂, NR⁴ (wherein R⁴ is hydrogen atom or an alkyl group) or a single bond;

R^2 represents hydrogen atom, a substituted or unsubstituted alkyl group, a substituted or unsubstituted alkenyl group, a substituted or unsubstituted alkynyl group or a substituted or unsubstituted cycloalkyl group; and

R^1 represents hydrogen atom, hydroxy group, an alkoxy group, an alkoxycarbonyl group, a haloalkyl group, a haloalkoxy group, a substituted or unsubstituted aryl group, a substituted or unsubstituted heteroaryl group or a substituted or unsubstituted cycloalkyl group, or its pharmaceutically acceptable salt.

2. (Currently Amended) The 8-oxoadenine compound according to claim 1, wherein ring A represents a 6-10 membered aromatic carbocyclic ring, or a 5-10 membered heteroaromatic ring containing 1-4 hetero atoms selected from 0-4 nitrogen atoms, 0-2 oxygen atoms and 0-2 sulfur atoms;

R represents a halogen atom, an alkyl group of 1-6 carbons, a hydroxyalkyl group of 1-6 carbons, a haloalkyl group of 1-6 carbons, an alkoxy group of 1-6 carbons, a hydroxyalkoxy group of 1-6 carbons, a haloalkoxy group of 1-6 carbons, amino group, an alkylamino group of 1-6 carbons, a dialkylamino group in which each alkyl moiety has 1-6 carbons, and a cyclic amino group;

n is an integer of 0-2, and when n is 2, Rs may be the same or different;

Z^1 represents an alkylene group of 1-6 carbons or a cycloalkylene group of 3-8 carbons, which is optionally substituted by hydroxy group;

X^2 represents oxygen atom, sulfur atom, SO_2 , NR^5 , CO, $CONR^5$, NR^5CO , SO_2NR^5 , NR^5SO_2 , NR^5CONR^6 or NR^5CSNR^6 (in which R^5 and R^6 are independently hydrogen atom, a substituted

or unsubstituted alkyl group of 1-6 carbons, and a substituted or unsubstituted cycloalkyl group of 3-8 carbons, wherein the substituents of the alkyl group or cycloalkyl group are selected from a halogen atom, hydroxy group, an alkoxy group of 1-6 carbons, carboxy group, an alkoxycarbonyl group of 2-5 carbons, carbamoyl group, amino group, an alkylamino group of 1-6 carbons, an dialkylamino group in which each alkyl moiety has 1-6 carbons, a cyclic amino group, carboxy group and tetrazolyl group which may be substituted by an alkyl group of 1-6 carbons[.]);

Y^1 , Y^2 and Y^3 represent each independently a single bond or an alkylene group of 1-6 carbons;

X^1 represents oxygen atom, sulfur atom, SO_2 , NR^4 (wherein R^4 represents hydrogen atom or an alkyl group) or a single bond;

R^2 represents a substituted or unsubstituted alkyl group of 1-6 carbons, a substituted or unsubstituted alkenyl group of 2-6 carbons, a substituted or unsubstituted alkynyl group of 2-6 carbons or a substituted or unsubstituted cycloalkyl group of 3-8 carbons (wherein the substituent in the alkyl group, alkenyl group and alkynyl group is selected from a halogen atom, hydroxy group, an alkoxy group of 1-6 carbons, an acyloxy group of 2-10 carbons, amino group, an alkylamino group of 1-6 carbons, a dialkylamino group in which the each alkyl moiety has 1-6 carbons, and a cyclic amino group); and

R^1 represents hydrogen atom, hydroxy group, an alkoxy group of 1-6 carbons, an alkoxycarbonyl group of 2-5 carbons, a haloalkyl group of 1-6 carbons, a haloalkoxy group of 1-6 carbons, a substituted or unsubstituted aryl group of 6-10 carbons, a substituted or unsubstituted 5-10 membered heteroaryl group containing 1-4 hetero atoms selected from 0-4 nitrogen atoms, 0-2

oxygen atoms and 0-2 sulfur atoms, or a substituted or unsubstituted cycloalkyl group of 3-8 carbons;

and the said substituent in the aryl group, the heteroaryl group and the cycloalkyl group is selected from a halogen atom, hydroxy group, an alkyl group of 1-6 carbons, a haloalkyl group of 1-6 carbons, an alkoxy group of 1-6 carbons, a haloalkoxy group of 1-6 carbons, an alkylcarbonyl group of 2-5 carbons, amino group, an alkylamino group of 1-6 carbons and a dialkylamino group (wherein the each alkyl group has 1-6 carbons),

and the said cyclic amino group represents a 4-7 membered saturated cyclic amino group containing 1-2 hetero atoms selected from 1-2 nitrogen atoms, 0-1 oxygen atom and 0-1 sulfur atom, which may be substituted with a halogen atom, hydroxy group, oxo group, an alkyl group of 1-6 carbons, an alkoxy group of 1-6 carbons, an alkylcarbonyl group of 2-5 carbons or an alkoxy carbonyl group of 2-5 carbons, in the formula (1) of the claim 1,

or its pharmaceutically acceptable salt.

3. (Currently Amended) The 8-oxoadenine compound or its pharmaceutically acceptable salt according to claim 1 or 2, wherein X^2 in the formula (1) of the claim 1 is oxygen atom, sulfur atom, NR^5 , SO_2 , NR^5SO_2 or NR^5CONR^6 .

4. (Currently Amended) The 8-oxoadenine compound or its pharmaceutically acceptable salt according to any of claims 1-3 claim 1, wherein Y^3 in the formula (1) of the claim 1 is a single bond, methylene or ethylene.

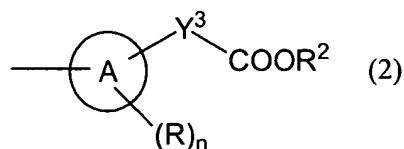
5. (Currently Amended) The 8-oxoadenine compound or its pharmaceutically acceptable salt according to ~~any of claims 1 to 4~~claim 1, wherein Z^1 in the formula (1) of the ~~claim 1~~ is a straight chained alkylene group of 1-6 carbons which may be substituted with hydroxy group.

6. (Currently Amended) The 8-oxoadenine compound or its pharmaceutically acceptable salt according to ~~any of claims 1-5~~claim 1, wherein X^1 in the formula (1) of the ~~claim 1~~ is oxygen atom or sulfur atom.

7. (Currently Amended) The 8-oxoadenine compound or its pharmaceutically acceptable salt according to ~~any of claims 1-6~~claim 1, wherein Y^1 in the formula (1) of the ~~claim 1~~ is a single bond or an alkylene group of 1-6 carbons.

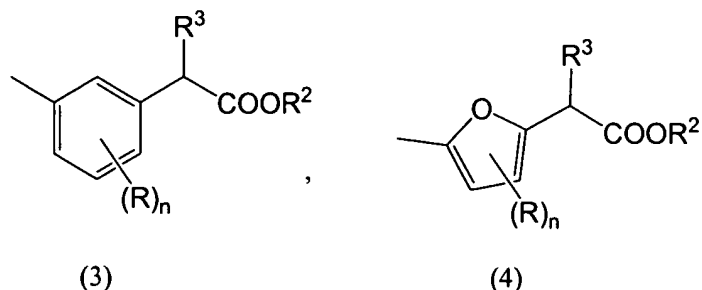
8. (Currently Amended) The 8-oxoadenine compound or its pharmaceutically acceptable salt according to ~~any of claims 1-7~~claim 1, wherein R^1 in the formula (1) of the ~~claim 1~~ is hydrogen atom, an alkoxycarbonyl group, hydroxy group, or an alkoxy group.

9. (Currently Amended) The 8-oxoadenine compound or its pharmaceutically acceptable salt according to ~~any of claims 1-8~~claim 1, wherein a group shown by the formula (2) in the formula (1) of the ~~claim 1~~:



(wherein ring A, R, n, Y^3 and R^2 have the same meaning as in the formula (1)claim 1)

is a group shown by the formula (3) or the formula (4):



(wherein R, n and R² have the same meaning as in ~~the formula (1)~~claim 1, and R³ is hydrogen atom or an alkyl group).

10. (Original) The 8-oxoadenine compound or its pharmaceutically acceptable salt according to claim 9, wherein R² is methyl group or an alkyl group of 2-6 carbons substituted by a dialkylamino group or a cyclic amino group.

11. (Original) The 8-oxoadenine compound or its pharmaceutically acceptable salt according to claim 9 or 10, wherein R³ is hydrogen atom.

12. (Currently Amended) A pharmaceutical composition comprising the 8-oxoadenine compound or its pharmaceutically acceptable salt ~~as claimed in any of claims 1-11~~ according to claim 1 as an active ingredient.

13. (Currently Amended) An ~~immune-modulator composition~~ comprising the 8-oxoadenine compound or its pharmaceutically acceptable salt ~~as claimed in any of claims 1-11~~ according to claim 1 as an active ingredient, wherein said composition has immuno-modulatory activity.

14. (Currently Amended) A ~~therapeutic or prophylactic agent for viral diseases, cancers or allergic diseases~~ composition comprising the 8-oxoadenine compound or its pharmaceutically acceptable salt ~~as claimed in any of claims 1-11~~ according to claim 1 as an active ingredient, wherein said composition has antiviral, anticancer or anti-allergy activity.

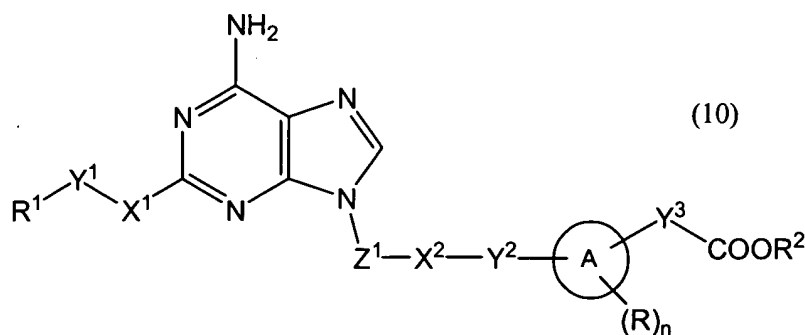
15. (Currently Amended) A ~~medicament for topical administration~~ composition comprising the 8-oxoadenine compound or its pharmaceutically acceptable salt ~~as claimed in any of claims 1-11~~ according to claim 1 as an active ingredient, wherein said composition is formulated for topical administration.

Claims 16-18 (CANCELLED)

19. (Currently Amended) A method for modulating immune response which comprises administering to a patient, an effective amount of the 8-oxoadenine compound or its pharmaceutically acceptable salt ~~as claimed in any of claims 1-11~~ according to claim 1.

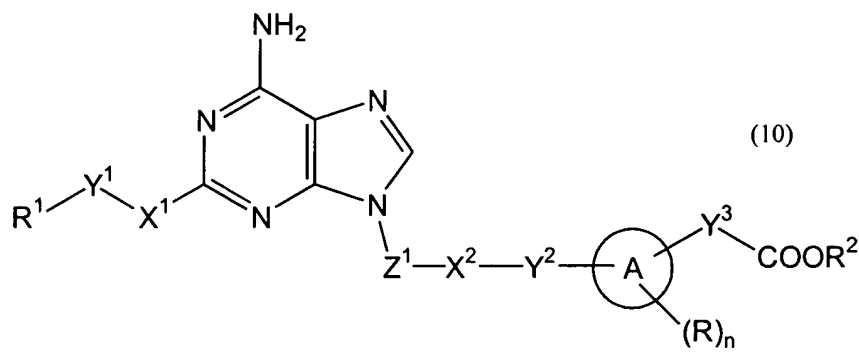
20. (Currently Amended) A method for treating or preventing viral diseases, cancers and allergic diseases which comprises administering to a patient, an effective amount of the 8-oxoadenine compound or its pharmaceutically acceptable salt ~~as claimed in any of claims 1-11~~ according to claim 1.

21. (Currently Amended) A process for preparing the 8-oxoadenine compound as claimed in any of claims 1-11 according to claim 1 which comprises brominating a compound shown by the formula (10):



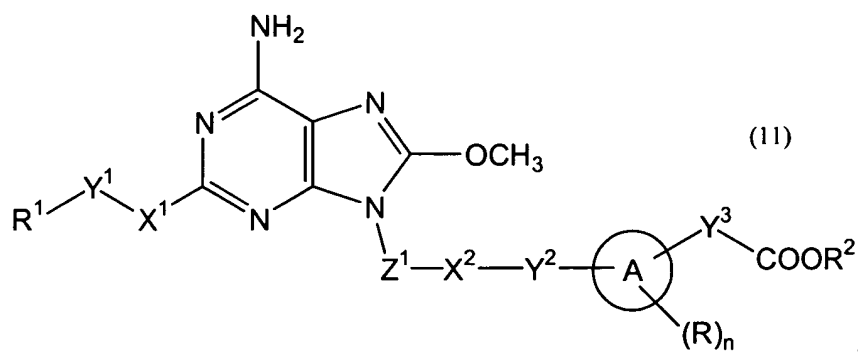
wherein ring A, n, R, R¹, R², X¹, X², Y¹, Y², Y³ and Z¹ are the same defined in the claim 1,
 reacting the resultant of the bromination with a metal alkoxide and then hydrolyzing, or
 hydrolyzing the resultant of the bromination.

22. (Original) A compound shown by the formula (10):



wherein ring A, n, R, R¹, R², X¹, X², Y¹, Y², Y³ and Z¹ are the same defined in the claim 1.

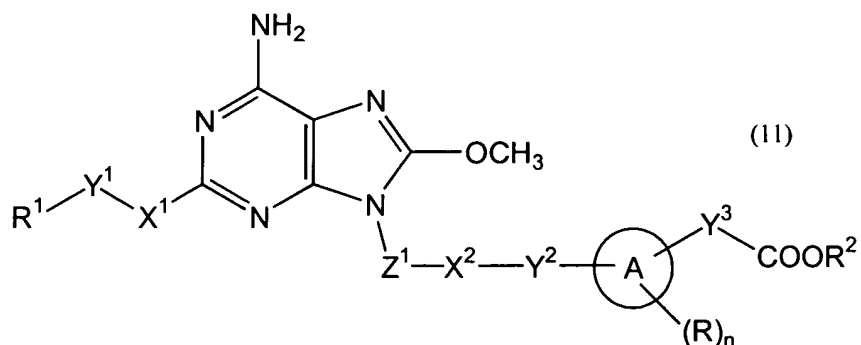
23. (Currently Amended) A process for preparing the 8-oxoadenine compound as described in ~~any of claim 1-11~~ according to claim 1 which comprises deprotecting a compound shown by the formula (11):



wherein ring A, n, R, R¹, R², X¹, X², Y¹, Y², Y³ and Z¹ are the same defined in the claim

1.

24. (Original) A compound shown by the formula (11):



wherein ring A, n, R, R¹, R², X¹, X², Y¹, Y², Y³ and Z¹ are the same defined in the

claim 1.

25. (Original) A compound or a pharmaceutically acceptable salt thereof selected from the group consisting of the following compounds:

2-Butoxy-8-oxo-9-[2-(3-methoxycarbonylphenoxy)ethyl]adenine,
2-Butoxy-8-oxo-9-[2-(3-methoxycarbonylmethylphenoxy)ethyl]adenine,
2-Butoxy-8-oxo-9-[2-(2-methoxycarbonylphenoxy)ethyl]adenine,
2-Butoxy-8-oxo-9-[2-(2-methoxycarbonylmethylphenoxy)ethyl]adenine,
2-Butoxy-8-oxo-9-[2-(4-methoxycarbonylphenoxy)ethyl]adenine,
2-Butoxy-8-oxo-9-[2-(4-methoxycarbonylmethylphenoxy)ethyl]adenine,
2-Butoxy-8-oxo-9-{2-[4-(2-methoxycarbonyl)ethyl]phenoxy}ethyladenine,
2-Butoxy-8-oxo-9-[4-(3-methoxycarbonylbenzenesulfonamide)butyl]adenine,
2-Butoxy-8-oxo-9-[4-(3-methoxycarbonylmethylbenzenesulfonamide)butyl]adenine,
2-Butoxy-8-oxo-9-[4-(3-methoxycarbonylphenylaminocarbonylamino)butyl]adenine,
2-Butoxy-8-oxo-9-[4-(3-methoxycarbonylmethylphenylaminocarbonylamino)butyl]adenine,
Methyl [3-({[2-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)ethyl]amino}methyl)phenyl]acetate,
[3-({[2-(6-Amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)ethyl]amino}methyl)phenyl]acetic acid,
Methyl 3-({[3-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)propyl]amino}methyl)benzoate,
3-({[3-(6-Amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)propyl]amino}methyl)benzoic acid,
Methyl 4-({[3-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)propyl]amino}methyl)benzoate,

4-({[3-(6-Amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)propyl]amino}methyl)benzoic acid,
Methyl (3-{{[3-(6-amino-2-butoxy-8-oxo-9H-purin-9-yl)propyl](2-morpholin-4-ylethyl)amino}methyl}phenyl)acetate,
Methyl [3-({[4-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl]amino}methyl)phenyl]acetate,
Ethyl 2-[2-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)ethoxy]benzoate,
3-(Dimethylamino)propyl 2-[2-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)ethoxy]benzoate,
Methyl 3-[4-({[4-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl]amino}sulfonyl)phenyl]propanoate,
3-[4-({[4-(6-Amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl]amino}sulfonyl)phenyl]propanoic acid,
Methyl (3-{{[4-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl](2-pyrrolidin-1-ylethyl)amino}sulfonyl}phenyl)acetate,
(3-{{[4-(6-Amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl](2-pyrrolidin-1-ylethyl)amino}sulfonyl}phenyl)acetic acid,
Methyl (3-{{[4-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl](2-methoxyethyl)amino}sulfonyl}phenyl)acetate,
(3-{{[4-(6-Amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl](2-methoxyethyl)amino}sulfonyl}phenyl)acetic acid,
Methyl (3-{{[4-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl](methyl)amino}sulfonyl}phenyl)acetate,

(3-([4-(6-Amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl](methylamino)sulfonyl}phenyl)acetic acid,

Methyl [3-([4-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl][3-(dimethylamino)-2,2-dimethylpropyl]amino}sulfonyl}phenyl]acetate,

[3-([4-(6-Amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl][3-(dimethylamino)-2,2-dimethylpropyl]amino}sulfonyl}phenyl]acetic acid,

Methyl [3-([3-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)propyl]amino}sulfonyl}phenyl]acetate,

Methyl (3-([4-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl](2-hydroxy-2-methylpropyl)amino)sulfonyl}phenyl)acetate,

(3-([4-(6-Amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl](2-hydroxy-2-methylpropyl)amino)sulfonyl}phenyl)acetic acid,

Methyl [3-([2-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)ethyl]amino}sulfonyl}phenyl]acetate,

Methyl [3-([4-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl][(2R)-2,3-dihydroxypropyl]amino}sulfonyl}phenyl]acetate,

[3-([4-(6-Amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl][(2R)-2,3-dihydroxypropyl]amino}sulfonyl}phenyl]acetic acid,

Methyl 3-([4-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl][3-(dimethylamino)-2,2-dimethylpropyl]amino}sulfonyl)benzoate,

3-([4-(6-Amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl][3-(dimethylamino)-2,2-dimethylpropyl]amino}sulfonyl)benzoic acid,

Methyl (3-{{[4-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl]}(3-morpholin-4-ylpropyl)amino}methyl}phenyl)acetate,

(3-{{[4-(6-Amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl]}(3-morpholin-4-ylpropyl)amino}methyl}phenyl)acetic acid,

Methyl [3-({[4-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl]}[3-(dimethylamino)-2,2-dimethylpropyl]amino}methyl)phenyl]acetate,

[3-({[4-(6-Amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl]}[3-(dimethylamino)-2,2-dimethylpropyl]amino}methyl)phenyl]acetic acid,

Methyl [3-({[4-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl]}[3-(2-oxopyrrolidin-1-yl)propyl]amino}methyl)phenyl]acetate,

[3-({[4-(6-Amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl]}[3-(2-oxopyrrolidin-1-yl)propyl]amino}methyl)phenyl]acetic acid,

Methyl (3-{{[4-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl]}(2-morpholin-4-ylethyl)amino}methyl}phenyl)acetate,

(3-{{[4-(6-Amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl]}(2-morpholin-4-ylethyl)amino}methyl}phenyl)acetic acid,

Methyl (3-{{[3-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)propyl]}(3-morpholin-4-ylpropyl)amino}methyl}phenyl)acetate,

Methyl [3-({[4-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl]}[2-(1H-tetrazol-5-yl)ethyl]amino}methyl)phenyl]acetate,

Methyl (3-{{[2-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)ethyl]thio}phenyl)acetate,

(3-{{2-(6-Amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)ethyl}thio}phenyl)acetic acid,
Methyl (3-{{2-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)ethyl}amino}phenyl)acetate,
Methyl (3-{{3-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)propyl}amino}phenyl)acetate,
(3-{{3-(6-Amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)propyl}amino}phenyl)acetic acid,
Methyl [3-({[3-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)propyl]amino}methyl)phenyl]acetate,
([3-({[3-(6-Amino-2-butoxy-8-methoxy-9H-purin-9-yl)propyl]amino}methyl)phenyl]acetic acid,
Methyl (3-{{[[2-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)ethyl](2-methoxyethyl)amino]methyl}phenyl)acetate,
(3-{{[[2-(6-Amino-2-butoxy-8-methoxy-9H-purin-9-yl)ethyl](2-methoxyethyl)amino]methyl}phenyl)acetic acid,
Methyl (3-{{2-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)ethyl)sulfonyl}phenyl)acetate,
Methyl (3-{{[[2-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)ethyl](methyl)amino]methyl}phenyl)acetate,
(3-{{[[2-(6-Amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)ethyl](methyl)amino]methyl}phenyl)acetic acid,
Methyl 4-[3-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)-2-hydroxypropoxy]benzoate,
Methyl (3-{{[[2-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)ethyl](2-

hydroxyethyl)amino)methyl}phenyl)acetate,
Methyl (3-{[[4-(6-amino-2-butoxy-8-oxo-7,8-dihydro-9H-purin-9-yl)butyl](2-hydroxyethyl)amino)methyl}phenyl)acetate,
2-Butoxy-8-oxo-9-[2-(3-hydroxycarbonylphenoxy)ethyl]adenine,
2-Butoxy-8-oxo-9-[2-(3-hydroxycarbonylmethylphenoxy)ethyl]adenine,
2-Butoxy-8-oxo-9-[2-(2-methoxycarbonylphenoxy)ethyl]adenine,
2-Butoxy-8-oxo-9-[2-(2-hydroxycarbonylmethylphenoxy)ethyl]adenine,
2-Butoxy-8-oxo-9-[2-(4-hydroxycarbonylphenoxy)ethyl]adenine,
2-Butoxy-8-oxo-9-[2-(4-methoxycarbonylmethylphenoxy)ethyl]adenine,
2-Butoxy-8-oxo-9-{2-[4-(2-hydroxycarbonylolethyl)phenoxy]ethyl}adenine,
2-Butoxy-8-oxo-9-[4-(3-hydroxycarbonylbenzenesulfonamide)butyl]adenine,
2-Butoxy-8-oxo-9-[4-(3-hydroxycarbonylmethylbenzenesulfonamide)butyl]adenine,
2-Butoxy-8-oxo-9-[4-(3-hydroxycarbonylphenylaminocarbonylamino)butyl]adenine and
2-Butoxy-8-oxo-9-[4-(3-hydroxycarbonylmethylphenylaminocarbonylamino)butyl]adenine.